

**PHYLOGENETICS OF THE EURETIDS (EURETIDAE: HEXACTINELLIDA).** *Memoirs of the Queensland Museum* 44: 626. 1999:- A long overdue phylogenetic analysis using 25 characters from 20 OTU's and two outgroups reveals several monophyletic groups within the Euretidae (Hexactinellidae) which may merit sub-family designation. The ordinal separation of Clavularia and Scopularia is disregarded on the basis of *Bathyxiphus subtilis* Schulze and *Claviscopulia furcillata* which contain both clavule and scopuline spicules. This analysis also suggests that an ancestral euretid closely

resembling *Farrea occa* Schulze possessed a pre-scopuline spicule and that microsclere spicules and body form are prone to homoplasy and are therefore not stable phylogenetic indicators. This preliminary analysis will hopefully stimulate further research and interest into hexactinellid phylogeny and biology. □ *Porifera, Hexactinellida, Euretidae, classification, spicules, phylogenetics, homoplasy.*

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